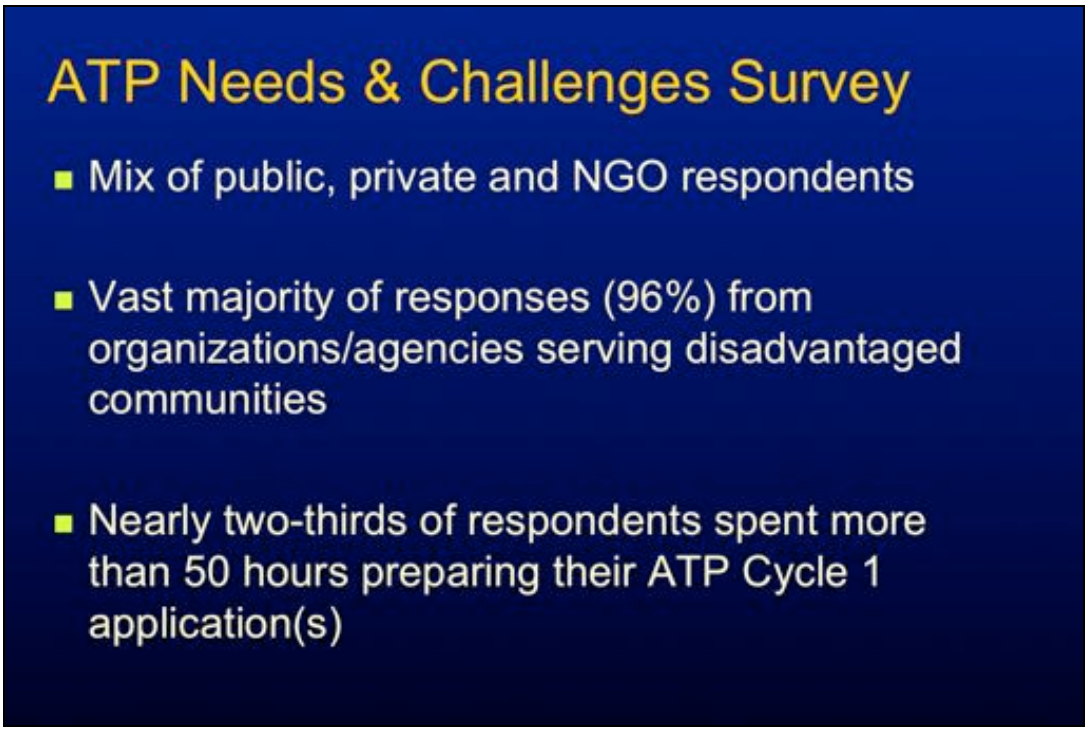
Developing Effective Active Transportation Projects and Programs

Support for Smaller Agencies and Disadvantaged Communities

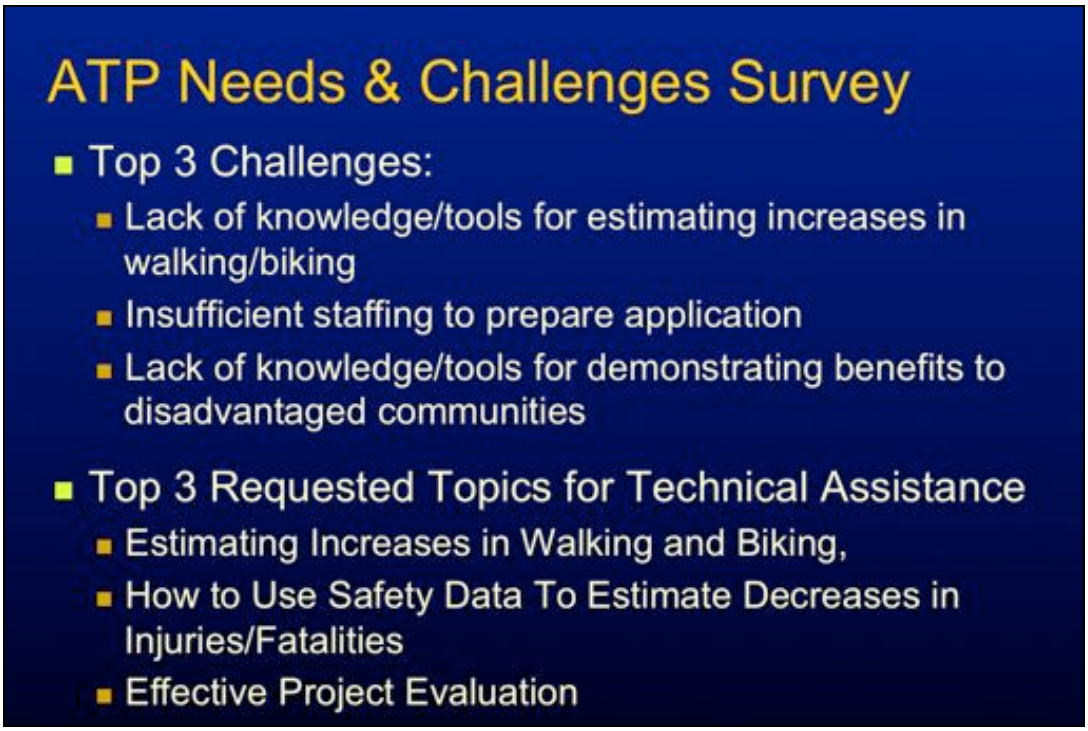
Module 4: Leveraging Data to Understand Active Transportation Needs

Caltrans | California Bicycle Coalition | California Walks | Local Government Commission | rails-to-trails conservancy



As part of this project we conducted a survey to help inform these workshops

- Reached a mix of public, private and NGO respondents
- Vast majority of responses (96%) from organizations/agencies serving disadvantaged communities
- Nearly two-thirds of respondents spent more than 50 hours preparing their ATP Cycle 1 application(s)



The survey identified top 3 challenges as well as areas for technical assistance.

Overview

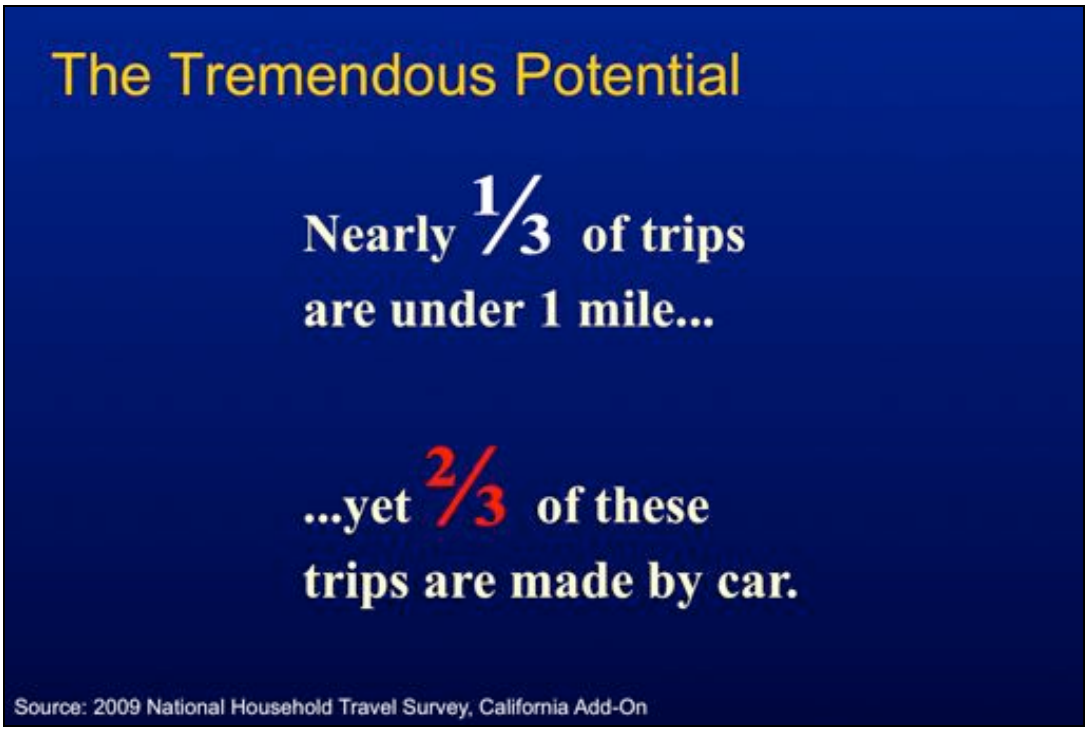
- Understanding Walking & Biking Trips
- Informing Project Development through:
  - Examining Community Characteristics
  - Evaluating Safety Conditions
  - Overlaying Data
- Cultivating Community & Stakeholder Support

Important to understand that walking and biking are better suited for shorter trips;

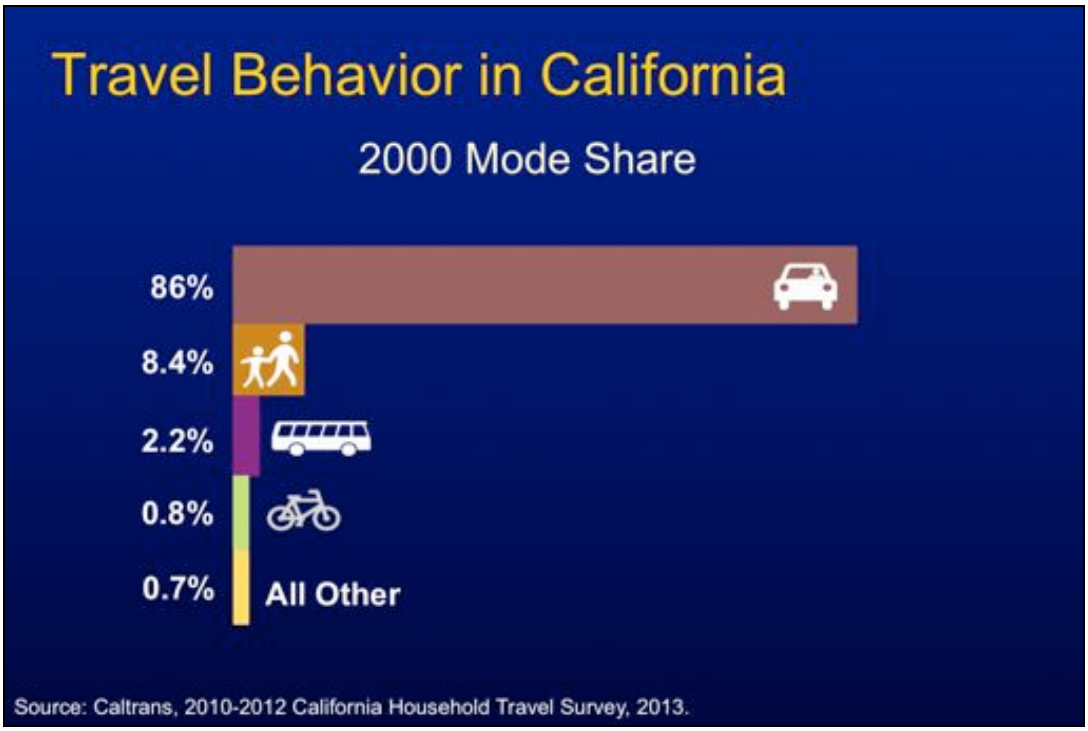
- 0.5 miles for walking trips; and
- 3 miles for bike trips

1 mile is a short 20 minute walk or an even shorter 6 minute bike ride.
So there is a tremendous potential to convert short trips from driving to walking/ bicycling

In fact, we even see that many trips people take in California are under 1 mile

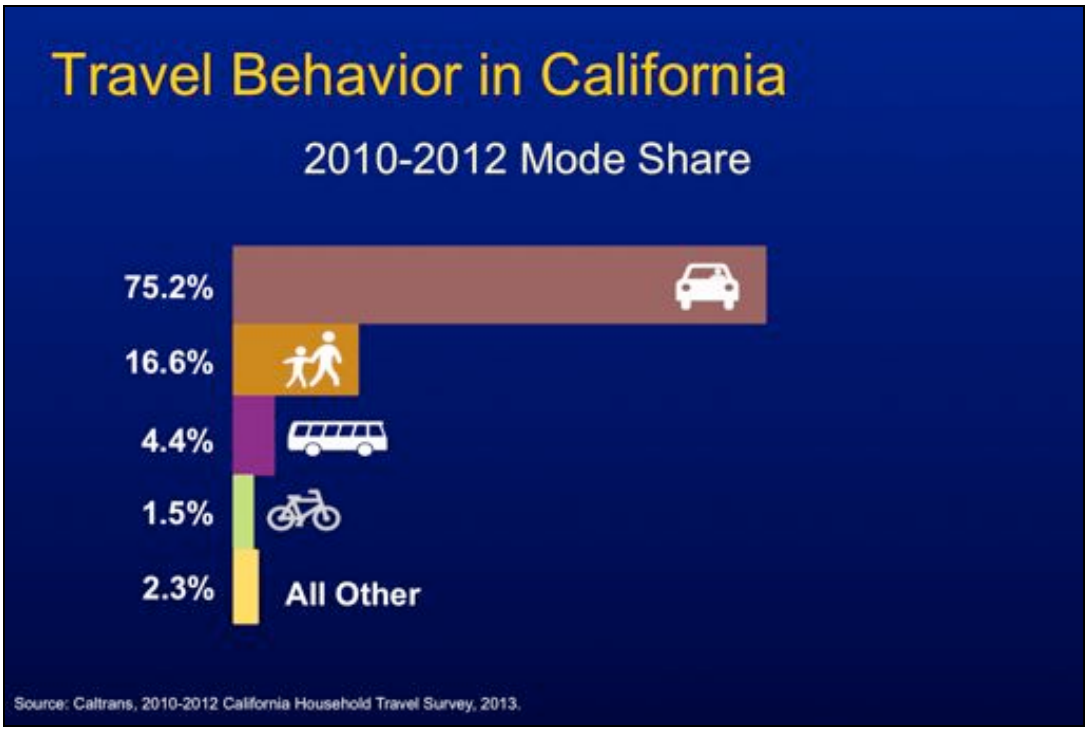


Yet 2/3 of these trips are made by car

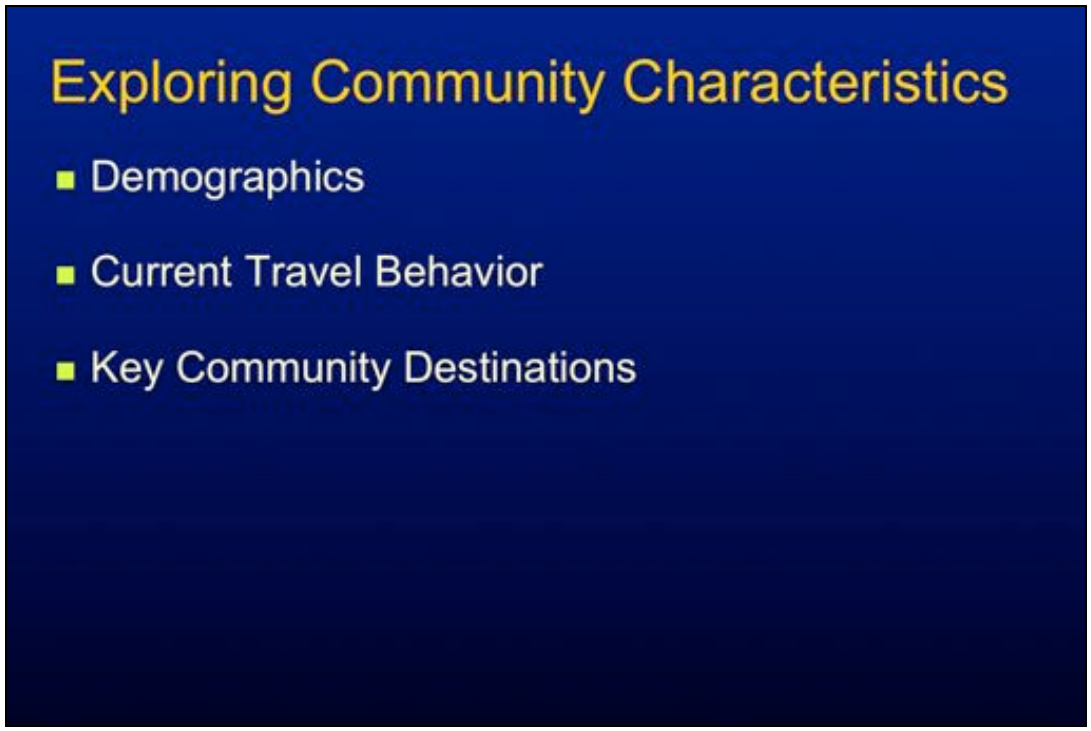


It is also important to understand how people are currently getting around in California.

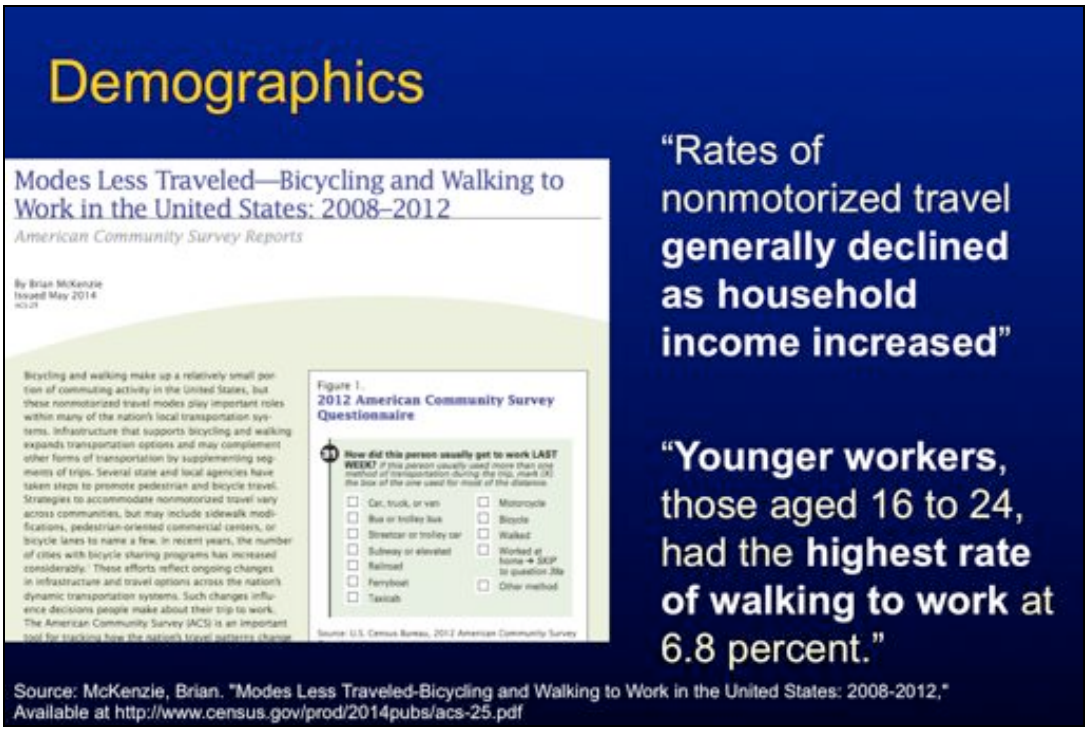
- Here is the breakdown of how Californians were traveling back in 2000 at a very macro level.
- You can clearly see that the auto is the dominant mode of transportation



- 10 years later, and we can see that there has been a decline in auto use
- We see that walking, biking, and transit use have all (roughly) doubled
- Please note that "All Other" also includes carpools/vanpools, school bus trips and private transportation trips that were not separately tracked in the 2000 CHTS
- We see that Californians are increasingly multi-modal.

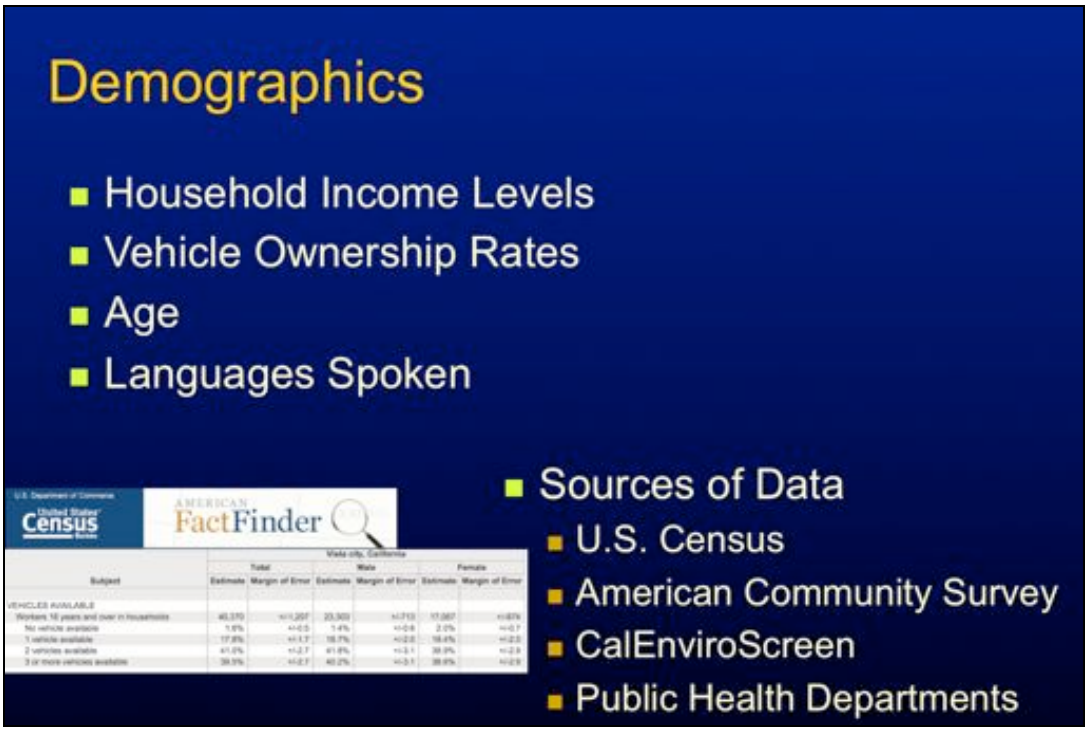


- To begin developing your project, you will need to first review various community characteristics that will help to document the community's need for your project.
- 3 key areas you will need to evaluate are:
    - Demographics
    - Current Travel Behavior
    - Key Community Destinations



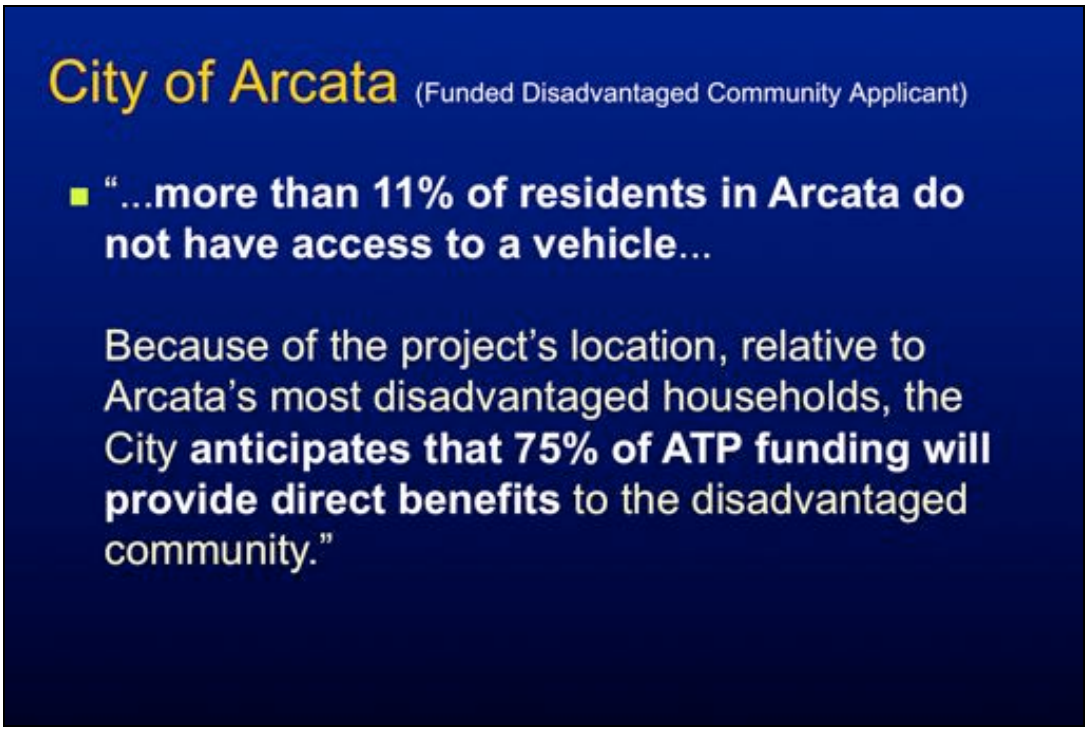
Demographics are important to review because they are correlated with travel behavior

- Studies of Census data have revealed very helpful travel behavior patterns that can inform how you develop a project.
- These are just a few of the findings in this study, but it really underscores how important it is for you to review the demographic data of your community.



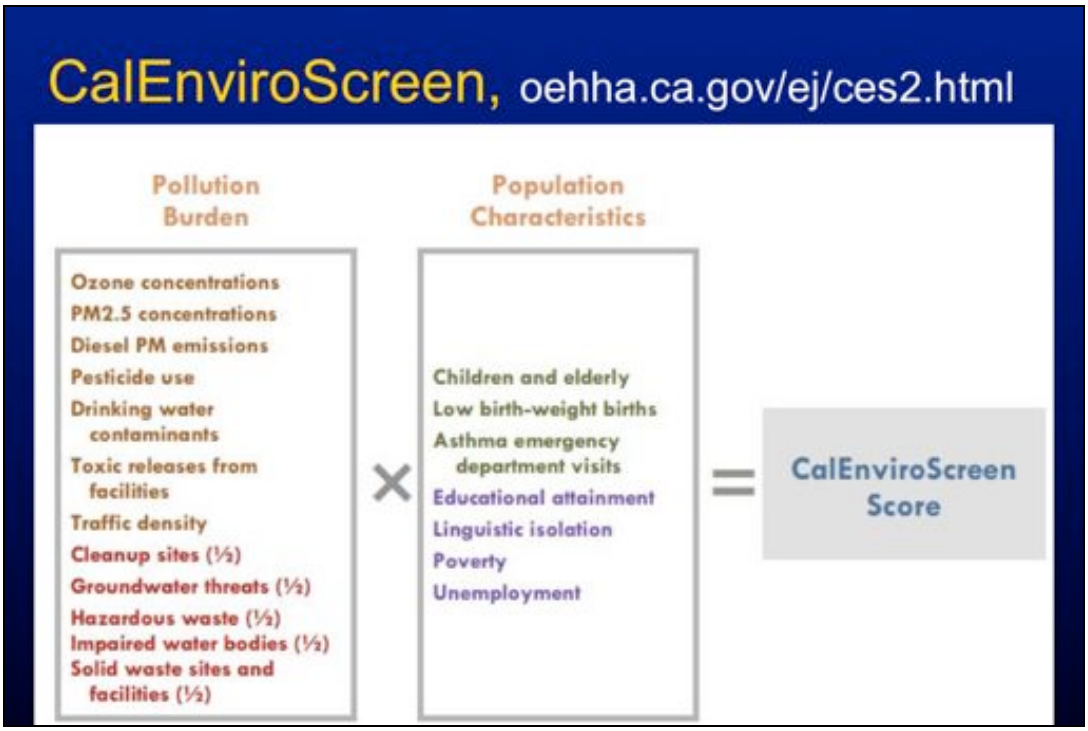
Talking Points:

- A few key demographic data points you will want to review are shown here.
- Looking up your community's median household income will help to document whether your community qualifies as a "disadvantaged community" under the ATP guidelines, and as shown on the previous slide, lower incomes tend to be associated with higher rates of walking and biking.
- Vehicle ownership rates are also a very easy piece of data you can pull from the American Community Survey, and households that do not own vehicles have generally been associated with higher rates of walking, biking, and transit use.
- Age is a very important demographic variable to review. Designing safe walking and biking facilities for children and seniors, especially if they are a large or expected to become a large percentage of your community, is critically important. Knowing the age make up of your community can help you better craft and meet age-specific active transportation needs.
- Lastly, finding out what languages are spoken in your community is extremely helpful in order to prepare for effective community outreach for your proejct.
- Sources for this type of demographic data are listed here.



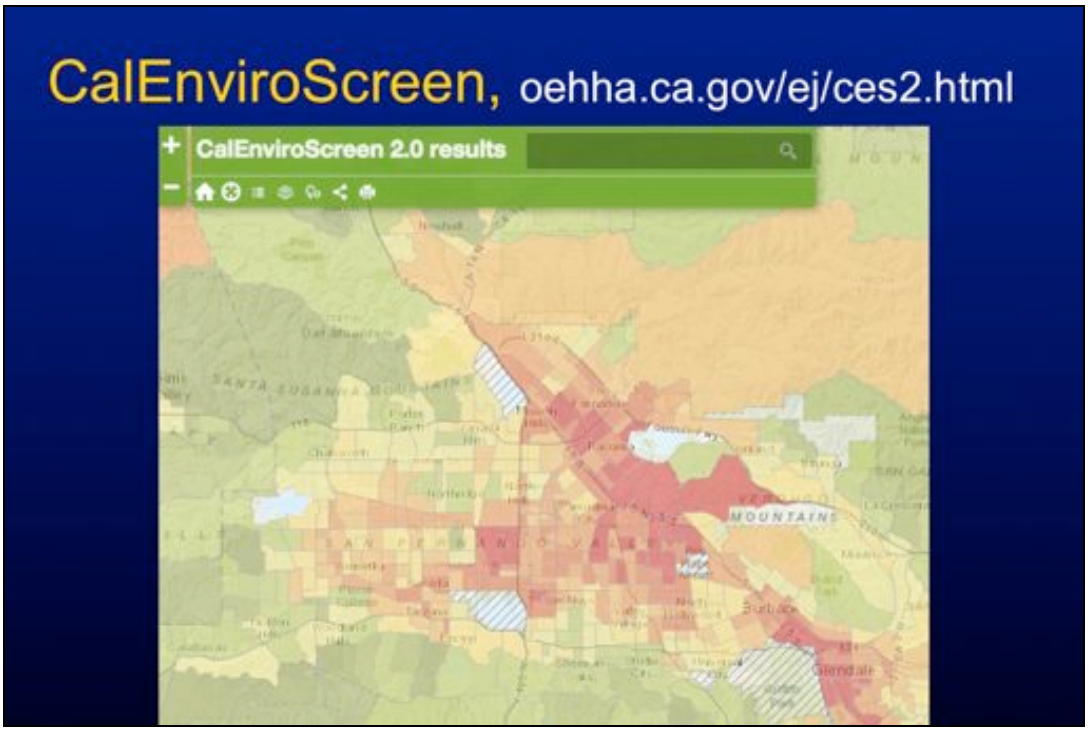
Here is an example from a Cycle 1 funded DAC application from Arcata, in Humboldt County.

- In this case the applicant used vehicle ownership rates as part of their response to the DAC benefit question
- After the demographic data piece the response goes on to explain how the project crossed through several low-income housing projects and neighborhoods
- Based on this, the applicant then estimated how much the project would benefit its low-income residents.



CalEnviroScreen is a tool developed by CalEPA

- It generates a composite score by looking at a host of pollution burden metrics and population characteristics
- CalEnviroScreen scores are one option for qualifying as a disadvantaged community
- In addition to the composite score, CalEnviroScreen also enables you to look at any individual metric at the Census tract level, which can be used to support other sections of your application
- For example, PM2.5 concentrations and asthma emergency department visits are 2 data points that can be used in the public health section of your application



In this screenshot of CalEnviroScreen's output you can see the higher scoring (i.e. more disadvantaged communities) are shaded in darker red

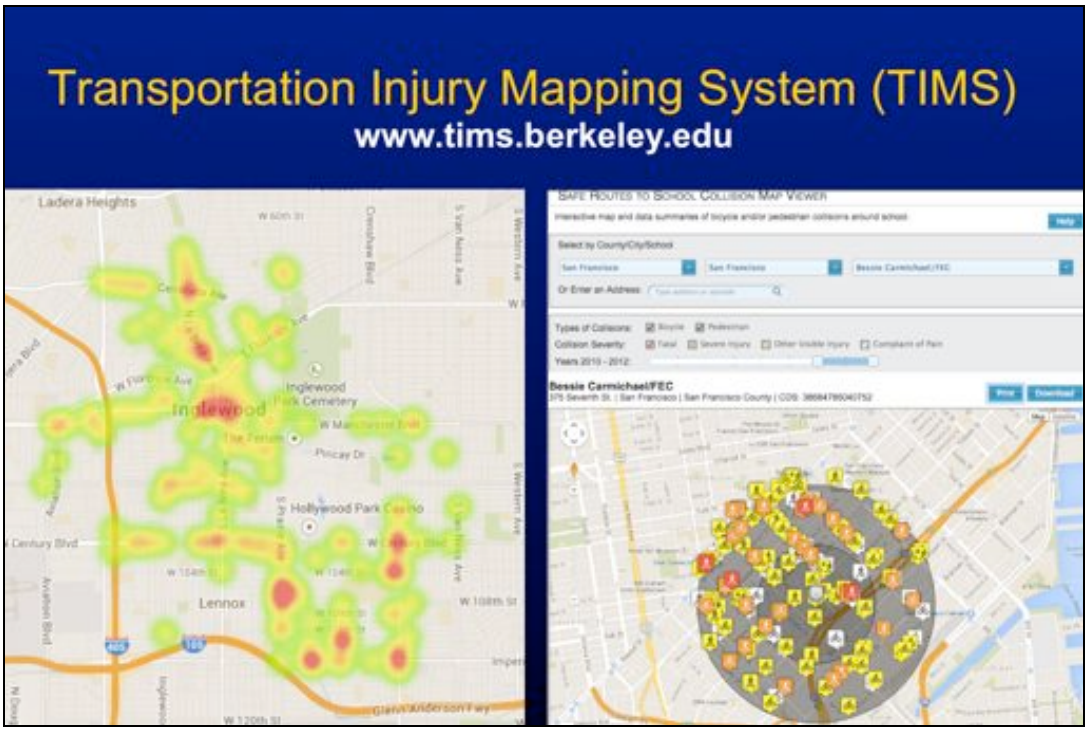
Talking Points:

- In addition to understanding the basic makeup of your community, it is critical to understand how residents are currently traveling in order to establish a baseline from which you can measure increases in walking and biking. In order to understand travel behavior, it is ideal to collect a large amount of this data over a long period of time.
- Again, you can tap the American Community Survey to retrieve commute to work data.
    - We do caution that commute trips are only a small percentage of overall trips and may not give a completely accurate picture of how residents are traveling for most of their daily needs.
- This is why it is important to establish or support an ongoing bicycle/pedestrian counting program.
    - In lieu of an ongoing counting program, a Pedestrian or Bicycle Master Plan will usually contain some amount of count data that can inform your project
- There are also many new types of automated technology that can make collecting walking and biking data much easier
- If you do not have a master plan, automated counters, or an ongoing counting program, there are a few short-term strategies to help you collect that data:
    - You can collaborate with the schools in your project area to conduct student travel tallies in the classroom; this will give you an approximate estimate for

- Now that you know what your community looks like and how many people are walking and biking, youneed to know where they want and need to go
- This is why it is critically important to identify key community destinations like the ones listed here
- Your project should help connect these key destinations

- To evaluate safety concerns, you need to address both quantitative and qualitative concerns in order to provide a complete picture of your community's safety needs and how your proposed project will address them
- Site visits and walkability assessments can be key to evaluating safety conditions

- Collision data will be the most readily available source of data for you to begin to evaluate the active transportation safety needs of your community.
- The state manages the SWITRS database using data submitted from local law enforcement agencies; please note that this data is generally 2-3 years behind due to a backlog of data entry
- SWITRS data can be accessed directly from the California Highway Patrol, but an easier way to access the data is through UC Berkeley Safe Transportation Research and Education Center's (SafeTREC) TIMS website
- TIMS is a free, publicly available resource that not only allows you to run queries of collision data, but also to map them
- TIMS also hosts a Safe Routes to School Map Viewer tool.
- Collaborating with your local police department or law enforcement agency is also strongly encouraged. These agencies will generally have more up to date collision reports than SWITRS
- It is important that you go beyond simply providing the number of collisions
    - You need to analyze the collision data to understand the primary collision factors and/or identify high collision corridors or hotspots that can be addressed through your proposed project
    - You then will want to identify a countermeasure or series of countermeasures to address the problem. The Crash Modification Factor web site set up by FHWA help you do this: http://



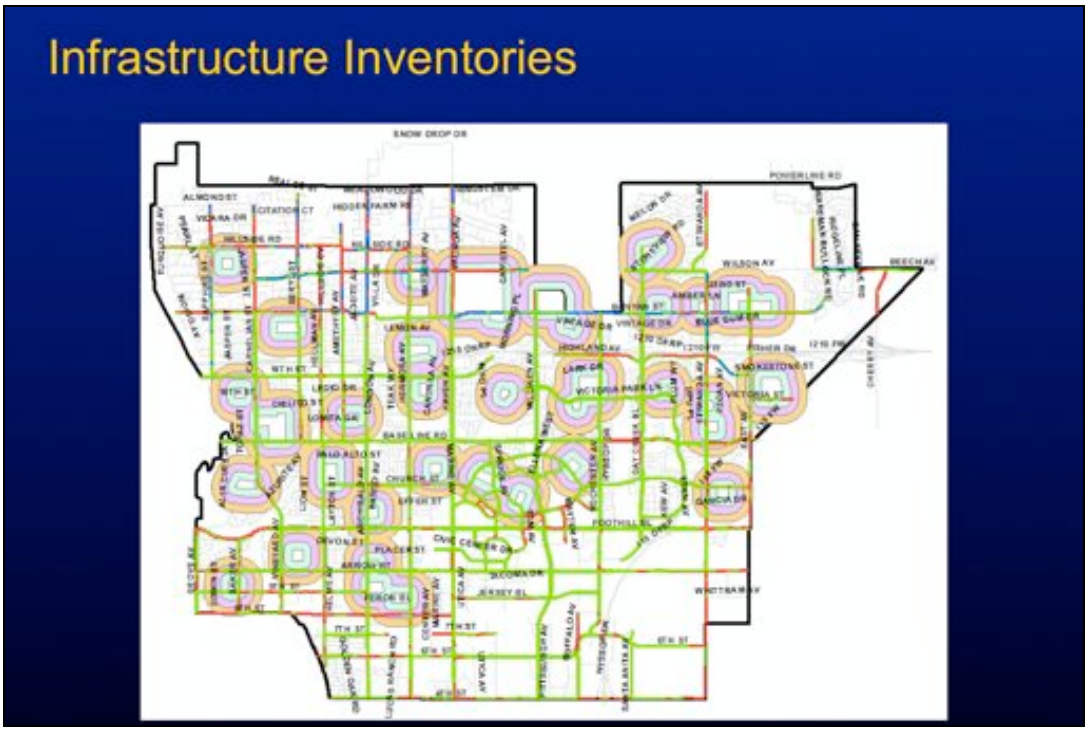
An example from TIMS

- On the left is an example query and GIS map of bicycle/pedestrian collisions in the City of Inglewood, 2010-2012, displayed as a heat map.
- Collisions can also be displayed individually and details on each collision are readily accessible.
- On the right is an example of the SRTS Map Viewer.
- This tool contains a database of all public schools in the state and can overlay bicycle and pedestrian collisions with the school location.

This OTS web site provides comparative data on California cities and counties

- OTS compares cities of similar size to assign rankings
- Rankings are available for pedestrian and bicyclist fatalities and injuries, as well as specific age groups within those categories

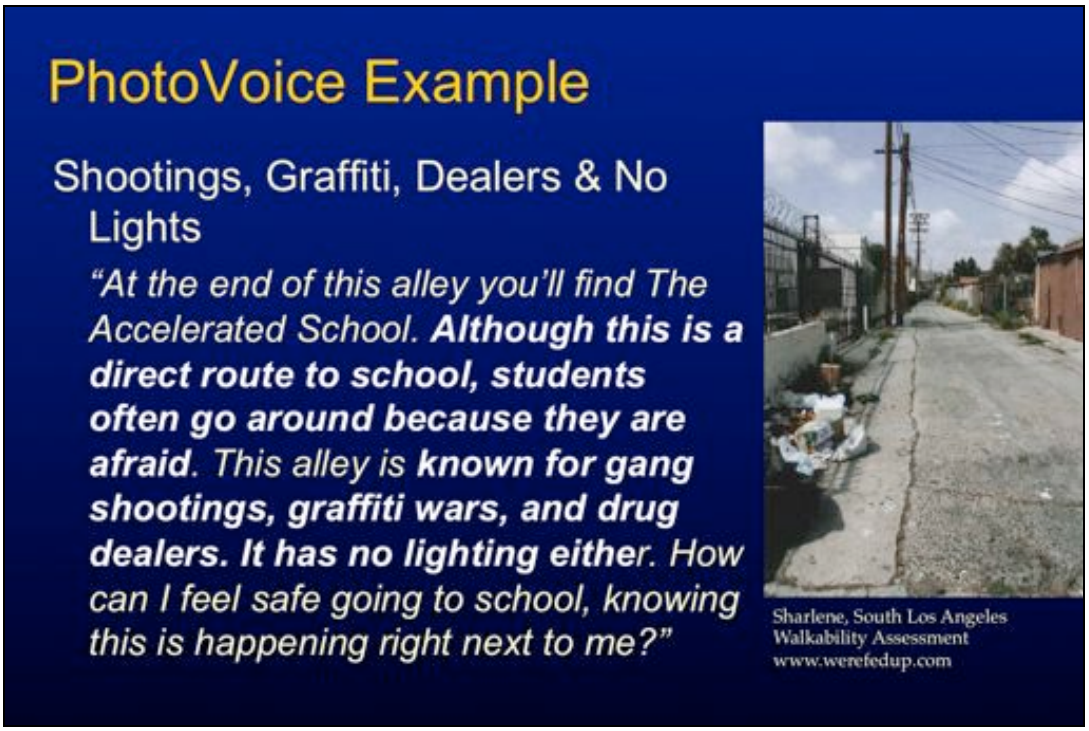
- The Caltrans Local Roadway Safety Manual is an extremely useful and detailed guide for how to conduct safety analyses and select the appropriate countermeasures.
- Additionally, the Manual has assigned CRFs to many countermeasures based on research and consultation with FHWA. For each approved countermeasure, the Manual details the applicable crash types, locations and uses for the countermeasure.
- FHWA also has 2 guides: PedSafe and BikeSafe. These are pedestrian and bicycle specific guides for evaluating and selecting countermeasures, along with associated costs and CRFs
- Lastly, there is a national CMF Clearinghouse that contains updated research on countermeasures that may not be included in the above resources. http://www.cmfclearinghouse.org/



- Here is an example of a sidewalk inventory from the City of Rancho Cucamonga.
- Such inventories help to better manage existing assets, as well as to prioritize repairs and installations
- Additionally, such inventories can be overlaid with sensitive populations (e.g. schools, senior centers, etc.); the above example also shows various distance buffers around schools
- Ideally, such inventorying would be completed on a community-wide basis (generally as part of a Pedestrian or Bicycle Master Plan)

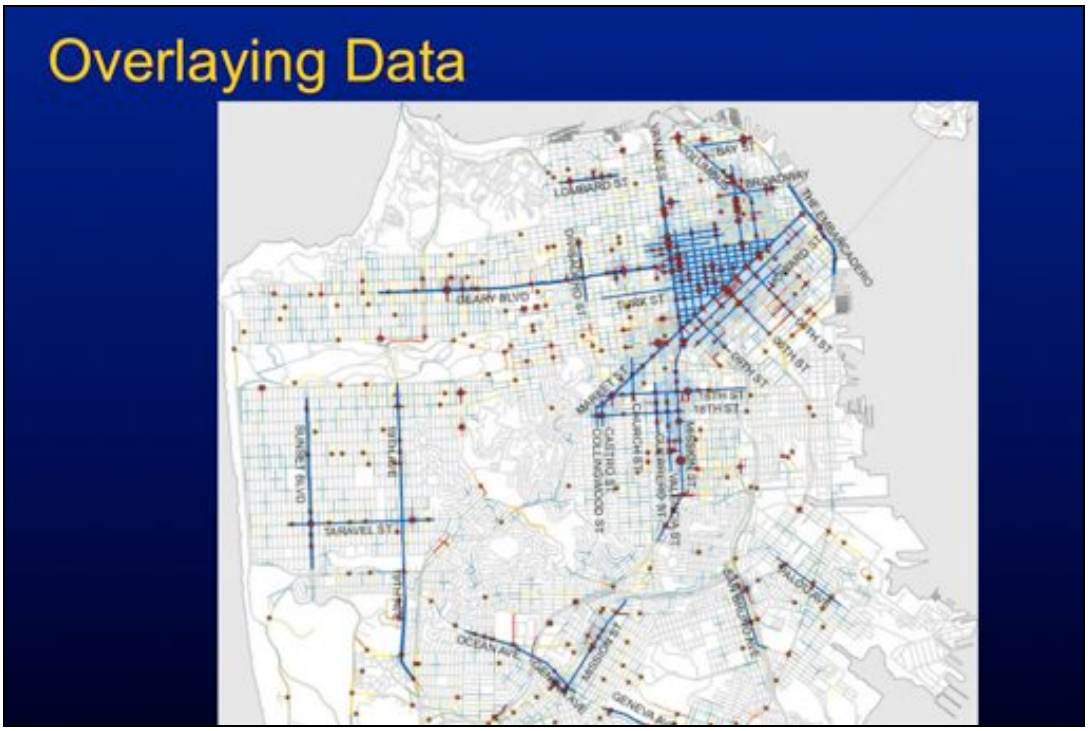
Talking Points

- Quantitative data—particularly collision data–only tell one part of the story.
- There are many issues that are difficult to quantify but that do have an impact on whether people feel safe enough to walk or bicycle in their community.
- To collect these qualitative community concerns, you can use these strategies:
    - Walk/bike audits: audits allow you to capture both quantitative and qualitative safety concerns
    - Community surveys: you can work with a community group or your public health department to design and administer a survey to capture whether residents are currently walking/biking and where, as well as what is preventing them from doing so
    - Community workshops
    - PhotoVoice and VideoVoice: this is a strategy that empowers community members to document a community condition affecting them either with photos or videos, as well as to express their desired solution



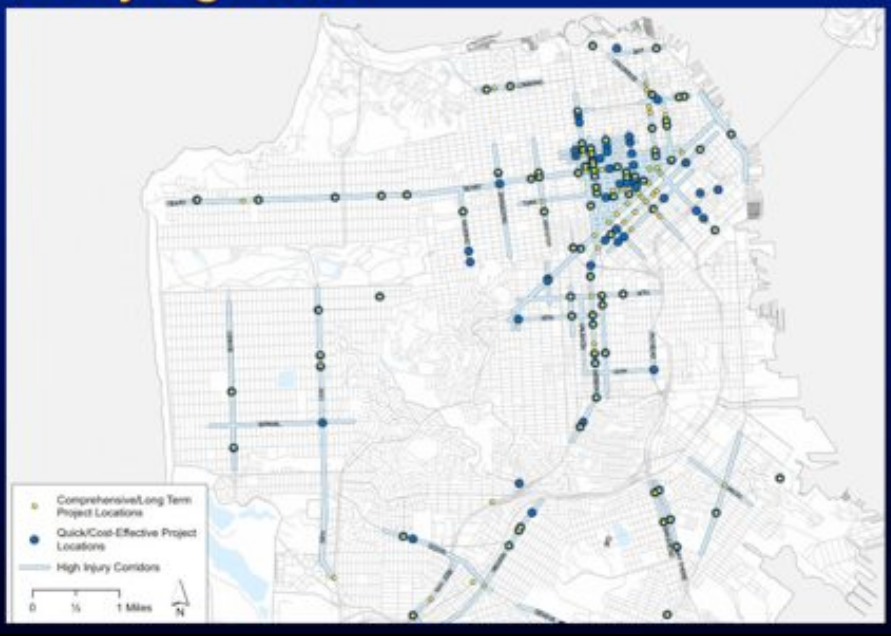
- Here is an example of PhotoVoice from South LA that captures safety concerns that prevent this young woman from walking to school.
- These types of safety concerns will not surface through collision data alone.

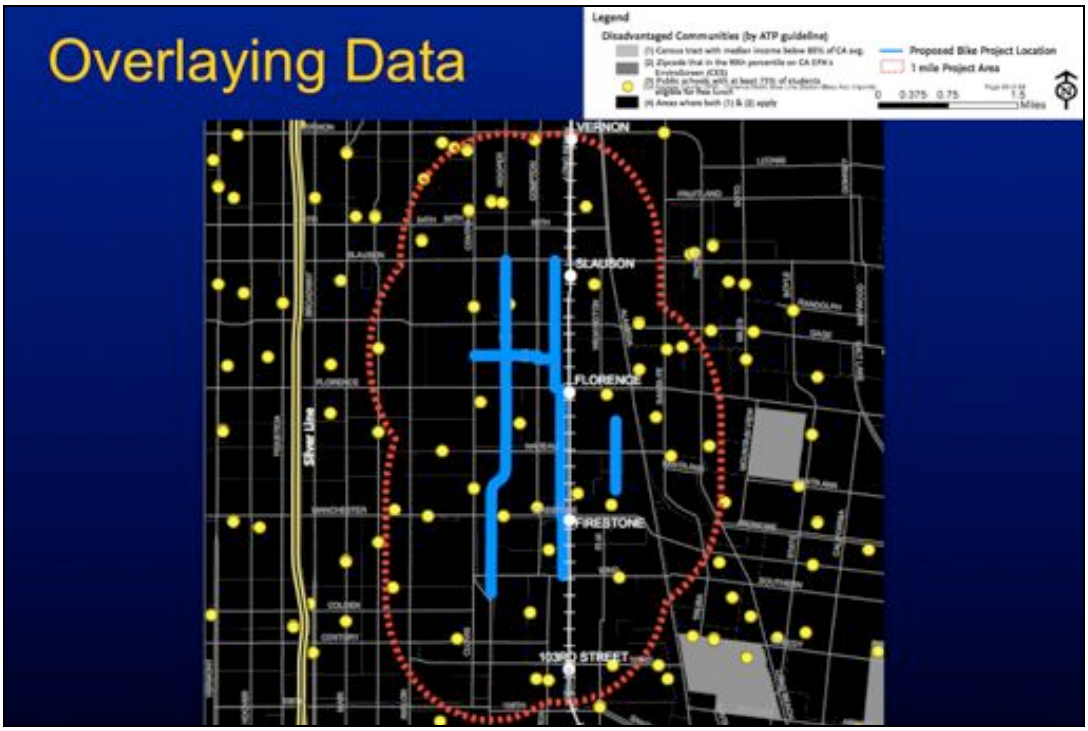
- It is very important to, at a minimum, visit the proposed project site in person to "ground truth" your own evaluation
    - It also really shows in your application if you have never visited the proposed project site
- If time permits, it is very beneficial to conduct a community wide assessment to better prepare you for future funding opportunities
- One resource you may wish to explore is UC Berkeley Tech Transfer's Pedestrian, Bicycle, and Rural Road Safety Assessment Programs.
    - They offer a limited number of free and comprehensive assessments each year to local jurisdictions across the state.
    - It is a very popular program in high demand



- By overlaying the various data you have collected, you can make a compelling and visual case for your community's need for the project being proposed.
- This is also a great way to collaborate with your public health department
- Here is an example from San Francisco:
    - The SF Dept. of Public Health has identified the City's network of "high injury corridors" and mapped them to the City's database of roadways
    - The identification of these corridors have been critically important in prioritizing streets for safety improvements as seen in the next slide

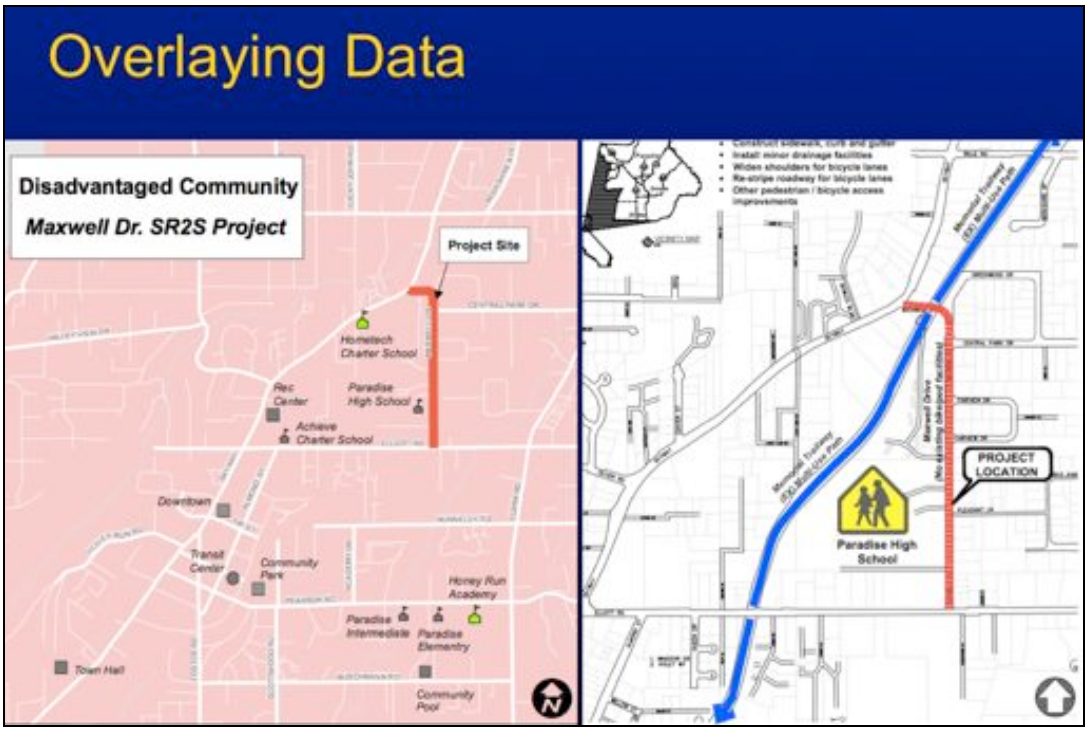
Overlaying Data





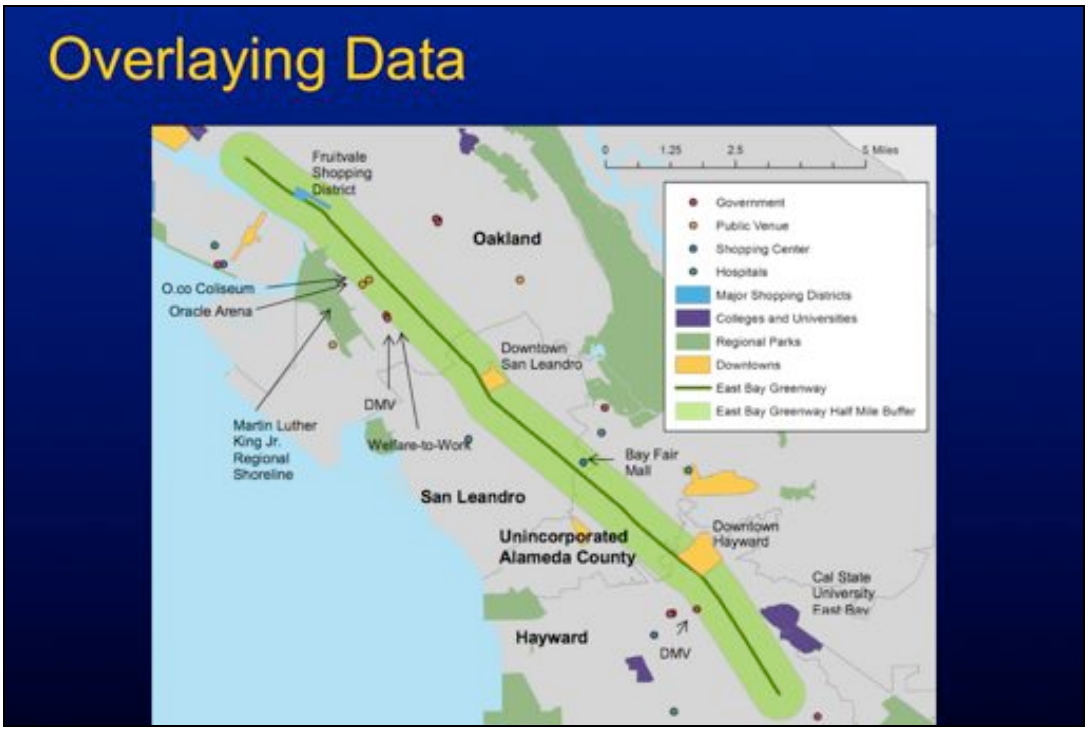
Here is an example from Los Angeles (ATP Cycle 1, Application ID 0446).

- Census tracts were color coded by the disadvantaged communities definitions (median household income and CalEnviroScreen), with black Census tracts fulfilling both definitions.
- Schools in the area that met the low-income school definition are highlighted in yellow
- The proposed project improvements are highlighted in blue.
- This was an effective way to demonstrate how the project would benefit disadvantaged community residents, by not only creating active transportation corridors but also connecting to the transit line that runs through the community (i.e. connecting to a key community destination).



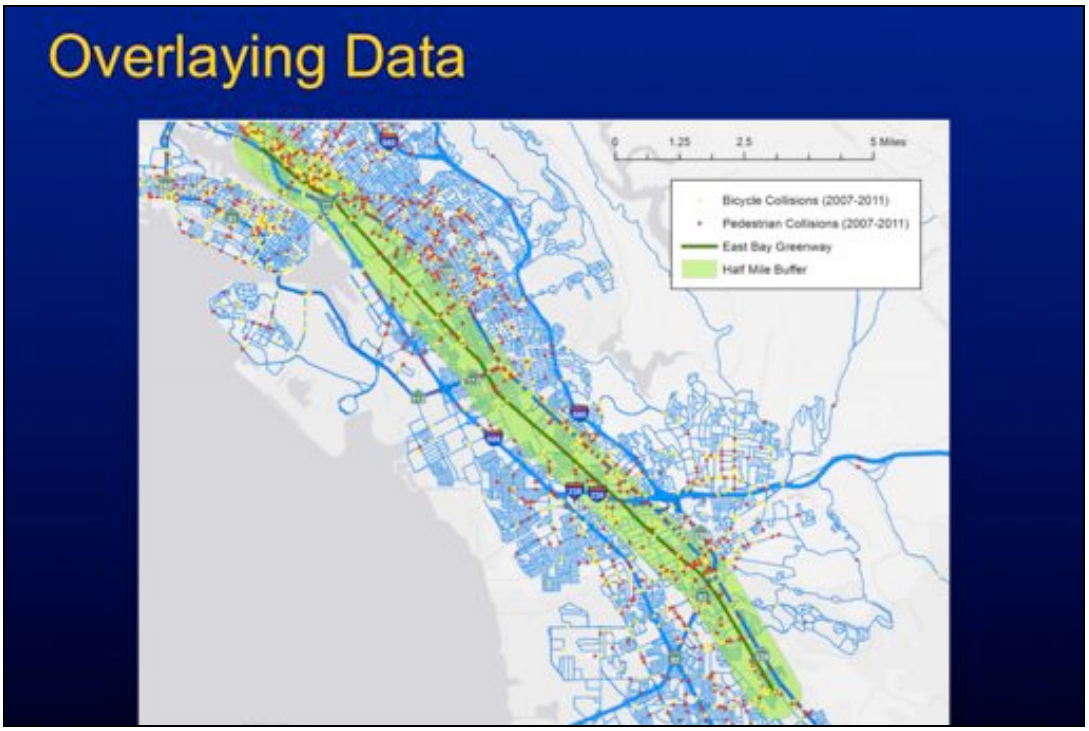
Here is an example from Paradise, CA in Butte County (ATP Cycle 1, Application ID 0051).

- On the left, you see key community destinations near the project site highlighted, as well as schools meeting the low-income definition.
- On the right, you can see how the project connects to the community's existing Memorial Trailway and really demonstrates how the project can increase non-motorized access and travel throughout the community.



Here is an example from Oakland, CA (ATP Cycle 1, Application ID 0118).

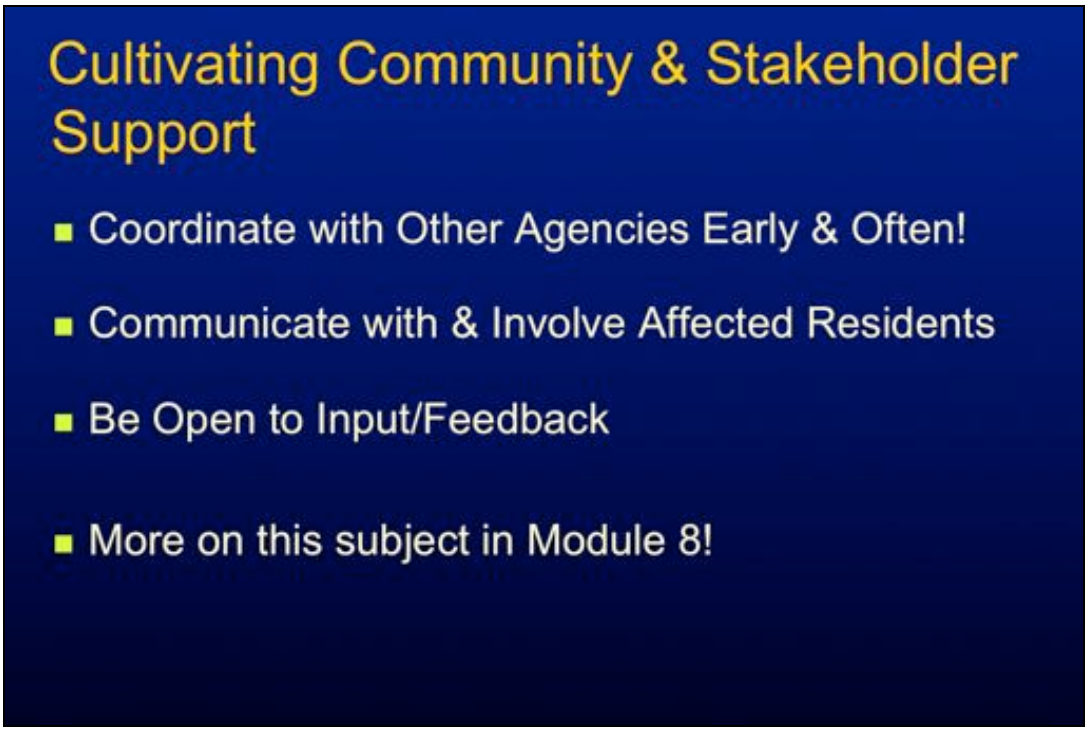
- Here the project is highlighted, as well as the numerous local and regional destinations that would be connected through the project.



- The project also highlighted the numerous pedestrian and bicyclist collisions along nearby corridors underscoring the safety need.

Mapping Resources

- Work with your local academic institutions and/ or health department
- Healthy City
  www.healthycity.org/
- Community Commons
  www.communitycommons.org
- Google Maps/Earth



Talking Points

- A later module will be covering the issue of community engagement more in-depth; however, it is important to underscore the need for community and stakeholder engagement early in the process as you are evaluating your community's active transportation needs and developing a project proposal
- By involving outside partners and collaborators, such as public health, law enforcement, NGO/CBOs, you can often receive assistance with:
    - Accessing existing data sources
    - Collecting additional data (crash data, counts, etc.)
    - Community outreach
    - Providing Letters of Support
    - On the ground perspectives (i.e. "ground truthing" your assessment of active transportation needs)
- By having open lines of communication with residents and stakeholders and modifying the project application to address their feedback, you will cultivate strong community support for the project


Questions/Comments?